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OXC 6676
Copy 4 of 5

APR 1964

25X1

MEMORANDUM FOR THE RECORD:

SUBJECT: Fuel/Altitude Computer Program

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In working sessions between OXCART representatives, [redacted] and Automation representative, [redacted], on 26 and 27 March 1964, the following actions were agreed upon:

1. Basically, program will compute altitude and/or %AB. Several options will be available for computations, insuring that enough information is given for an accurate solution, and too much information is not given resulting in a partial solution that the computer will not accept as correct. Inputs/outputs may include the following:

	Given Factors	Solution
a. At a given or computable position		
(1)	Altitude, gross weight	%AB
(2)	%AB	Altitude
(3)	Altitude %AB	Gross Weight

b. Other solutions with variable combinations of unknowns may be available.

2. Additional fuel used in "step" climbs/descents from one profile to another would be ignored, inasmuch as less than 50 pounds would be involved. Upon receiving instructions to utilize different profile (%AB), computer will immediately compute fuel and altitude for the new profile, printing same on next line entry.

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3. Computer print out will depict %AB, not as pilot instructions, but as an aid to Mission Planners, in necessary replanning situations.

4. Profiles available will be 60 through 100%, in 5% increments, with corresponding altitude factors vs. gross weight. Any profile that falls between these increments will be computed by utilizing the next higher profile, e.g., 66% would use 70% profile. This will provide, in some instances, a small pad in fuel computations.

5. Computer limits will be 60% (low) and 100% (high) together with applicable altitudes. If a problem is given that is not solvable within these limits, the computer will reject the problem and will advise which instruction is not feasible.

6. All turns will be computed using 100% profile, with no gain in altitude due to lighter gross weight. This is an interim solution, and a better instruction may be presented later.

7. Working sessions between OXCART and Automation personnel will be held frequently to exchange ideas and insure that common goals are reached with a minimum of wasted effort.

signed
[redacted]
Major USAF
OXC/OSA

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OXC/OSA [redacted]:kb (1 Apr 64)
Distribution:
#1 - OXC/OSA
#2 - D/FA/OSA
#3 - AUTO/OSA
#4 - RB/OSA
#5 - Hold Back

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